

### FOR UHF MIXER AND AMPLIFIER APPLICATIONS

## DESCRIPTION AND RATING

The 6AM4 is a miniature high-mu triode designed for use as a grounded-grid mixer or amplifier in television receivers that operate in the ultra-high-frequency region. Its sharp-cutoff and high transconductance, coupled with its excellent isolation between input and output, make the 6AM4 well suited for grounded-grid mixer or amplifier service over the entire range of VHF-UHF television frequencies.

### GENERAL

#### ELECTRICAL

Cathode—Coated Unipotential

Heater Voltage, AC or DC..... 6.3 Volts

Heater Current..... 0.225 Amperes

Direct Interelectrode Capacitances      **With Shield\***      **Without Shield**

Plate to Cathode..... 0.16      0.16  $\mu\mu\text{f}$

Cathode to Grid and Heater..... 4.6      4.4  $\mu\mu\text{f}$

Plate to Grid and Heater..... 2.8      2.4  $\mu\mu\text{f}$

Heater to Cathode..... 1.8      1.8  $\mu\mu\text{f}$

#### MECHANICAL

Mounting Position—Any

Envelope—T-6½, Glass

Base—E9-1, Small Button, 9-Pin

### MAXIMUM RATINGS

#### DESIGN-CENTER VALUES

Plate Voltage..... 200 Volts

Positive DC Grid Voltage..... 0 Volts

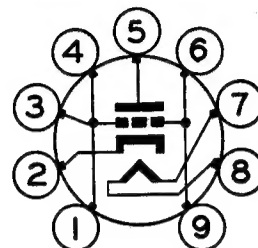
Plate Dissipation..... 2.0 Watts

Heater-Cathode Voltage

Heater Positive with Respect to Cathode..... 80 Volts

Heater Negative with Respect to Cathode†..... 80 Volts

### BASING DIAGRAM



RETMA 9BX

### TERMINAL CONNECTIONS

Pin 1—Grid

Pin 2—Cathode

Pin 3—Grid

Pin 4—Grid

Pin 5—Plate

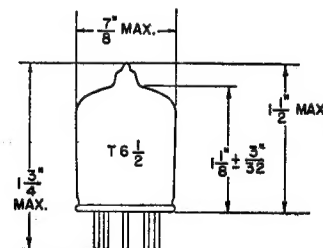
Pin 6—Grid

Pin 7—Heater

Pin 8—Heater

Pin 9—Grid

### PHYSICAL DIMENSIONS



RETMA 6-1

## CHARACTERISTICS AND TYPICAL OPERATION

### CLASS A<sub>1</sub> AMPLIFIER

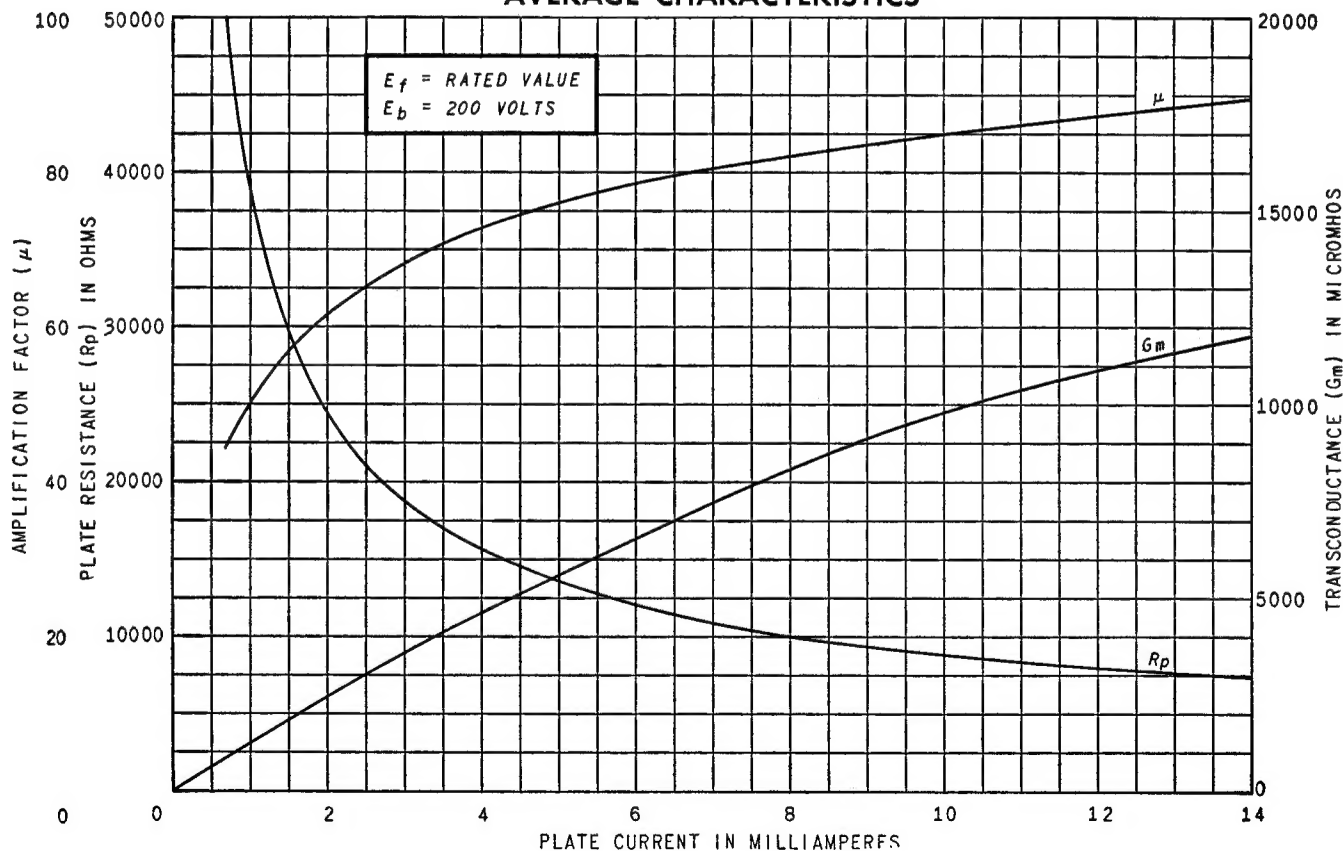
Plate Voltage .....	200	Volts
Cathode-Bias Resistor .....	100	Ohms
Amplification Factor .....	85	
Plate Resistance, approximate .....	8700	Ohms
Transconductance .....	9800	Micromhos
Plate Current .....	10	Milliamperes
Grid Voltage, approximate I <sub>b</sub> = 10 Microamperes .....	-6.5	Volts

\* With external shield (RETMA 315) connected to grid.

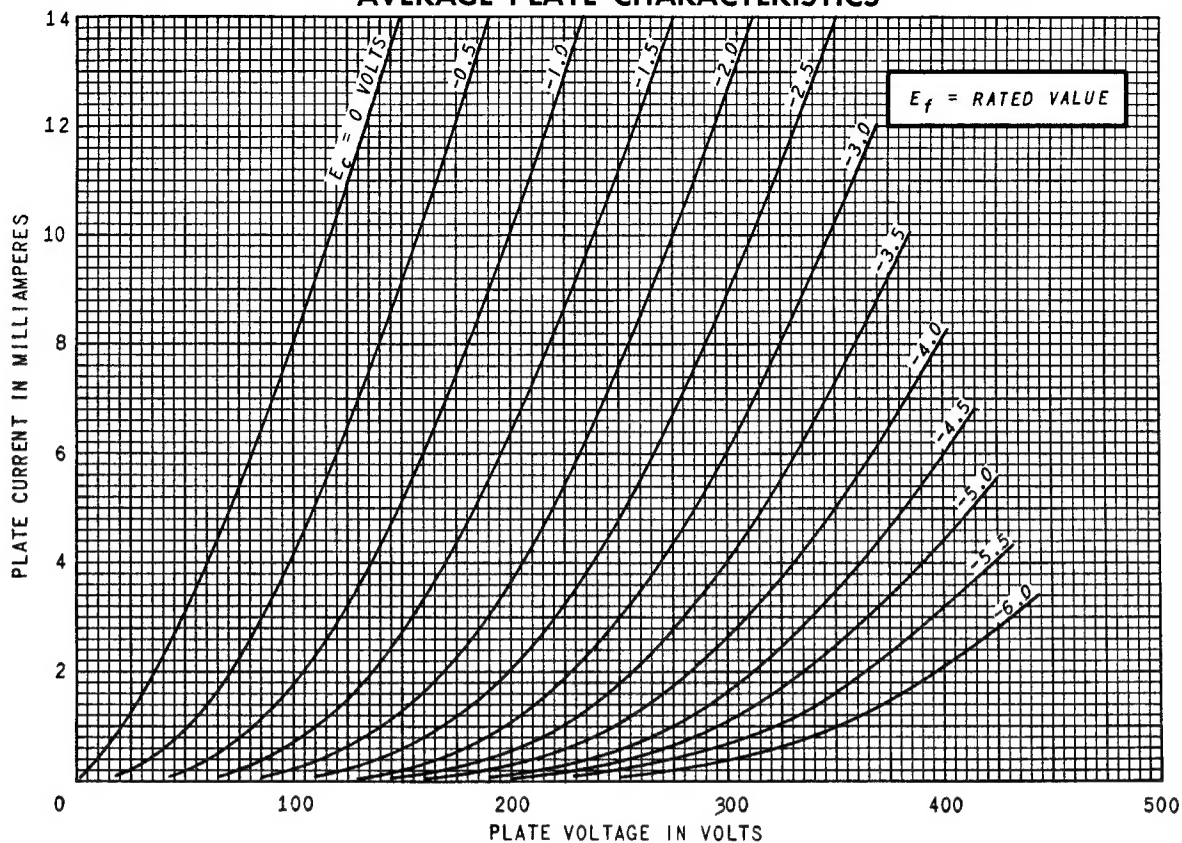
† When the tube is used in a cascode amplifier with a second tube and the two tubes are connected in series, this voltage may be as high as 250 volts maximum under cutoff conditions.

Note: When the 6AM4 is used in grounded-grid operation at high frequencies, all five grid terminals should be grounded to minimize the effects of grid-lead inductance.

### AVERAGE CHARACTERISTICS



### AVERAGE PLATE CHARACTERISTICS



### AVERAGE TRANSFER CHARACTERISTICS

